Title	表紙・目次
Author(s)	
Citation	数理解析研究所講究録 (2002), 1249
Issue Date	2002-02
URL	http://hdl.handle.net/2433/41763
Right	
Type	Others
Textversion	publisher

数理解析研究所講究録1249

International Conference on Reaction-Diffusion Systems: Theory and Applications

京都大学数理解析研究所

2002年2月

Preface

Reaction-diffusion systems arise in continuous models for large number of physical, bioligical chedmical and other systems. Analytical and complementarily numerics of these systems have surprisingly revealed diversity of complex spatio-temporal patterns occurring in reacting-diffusing media. For instance, we can see that reaction-diffusion waves in chemical systems, nerve impilse propagation in neurophysiological systems, cell-differentiation and morphogenesis in biological systems and invasion of alien species in ecological systems have been intensively investigated .

As a special project research year held in April 2000-March 2001, Research Institute for Mathematical Sciences (RIMS) at Kyoto University, we organized an international conference on Reaction-Diffusion Systems: Theory and Applications, which was held in February 5-8, 2001.

This book contains a collection of the papers which survey recent developments of reaction-diffusion systems with theories and applications. The individual authors of this book were participants in this conference.

We would like to thank all of those who took part in the project reseach year, particularly the contributors in this conference.
Also, we thank Grant-in-Aid for Scientific Research (A) 12304006, Grand-in-Aid for Scientific Research on Priority Area (B) 11214101 and Japan Association for Mathematical Sciences for support of this conference.

M. Mimura (Hiroshima University)
H. Okamoto (RIMS, Kyoto University)

December 2001

International Conference
on
Reaction-Diffusion Systems: Theory and Applications

Organizers: Masayasu MIMURA and Hisashi OKAMOTO

Time: February 5(Monday) ~February 8(Thursday), 2001
Place: Room 420, RIMS, Kyoto University

February 5 (Monday)

13:00-13:10 Opening address **Masayasu Mimura** (Hiroshima University)

13:10-13:50 **Wei-Ming Ni** (University of Minnesota, U.S.A.)
Recent progress on the Lotka-Volterra competition system with cross-diffusion

14:00-14:40 **Eiji Yanagida** (Tohoku University)
Stability analysis for shadow systems

14:50-15:20 break

15:20--16:00 **Danielle Hilhorst** (University of Paris-Sud, France)
The singular limit of a reaction-diffusion system with resource-consumer interaction

16:10-16:50 **Yoshihisa Morita** (Ryukoku University)
Some dynamical aspects of vortices in the Ginzburg-Landau equation

February 6 (Tuesday)

10:00-10:40 **Takashi Suzuki** (Osaka University)
Time global solutions for a parabolic elliptic system modelling chemotaxis

10:50-11:30 **Jong-Shenq Guo** (Taiwan Normal University, Taiwan)
Blow-up behaviour for a quasi-linear parabolic equation

11:40-12:20 **Kunimochi Sakamoto** (Hiroshima University)
Equilibrium transition layers intersecting the boundary of domain for reaction-diffusion systems

12:30-14:00 Lunch break

14:00-14:40 **Odo Diekmann** (Utrecht University, Netherlands)
Quasilinear population models

14:50-15:20 break

15:20-16:00 **Yasumasa Nishiura** (Hokkaido University)
Geometrical approach to complex dynamics in dissipative systems

16:10--16:50 **Miguel Herrero** (Complutense University of Madrid, Spain)
Lines and nets:models of filamentary structures

February 7 (Wednesday)

10:00-10:40 **Marianito Rodrigo** (Hiroshima University)
Exact solutions and front dynamics of reaction-diffusion systems

10:50-11:30 **Hiroshi Matano** (University of Tokyo)
Travelling waves in spatially inhomogeneous media --- the non-periodic case

11:40-12:20 **Michel Chipot** (University of Zurich, Switzerland)
On the asymptotic behaviour of the solution of parabolic problems in cylindrical domains becoming unbounded

12:20-14:00 Lunch break

14:00-14:40 **Paul Fife** (University of Utah, U.S.A.)
The intricacies of grain boundary movement

14:50-15:20 break

15:20-16:00 **Shin-ichiro Ei** (Yokohama City University)
Dynamics of pulse-like localized solutions in reaction-diffusion systems

16:10-16:50 **Alberto Tesei** (University of Roma, Italy)
On a class of parabolic equations with variable density and absorption

February 8 (Thursday)

10:00-10:40 **Georg S. Weiss** (University of Tokyo)
A singular limit in combustion: fine properties of the free boundary

10:50-11:30 **Nobuyuki Kenmochi** (Chiba University)
Phase change problems arising in the Czochralski Process of Crystal Growth

11:40-12:20 **Jose Francisco Rodrigues** (University of Lisbon, Portugal)
Reaction-diffusion: from systems to nonlocal equations

12.30 Closing address

Contents